



State Of Montana Teachers' Retirement System Agency IT Plan

FOR FY2010 - FY2015 IT PLAN UPDATE

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INFORMATION TECHNOLOGY SERVICES DIVISION

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EXECUTIVE SUMMARY

The Montana Teachers' Retirement System (TRS) mission is "To promote long-term financial security for our membership while maintaining the stability of the fund." IT services performs a major role in realizing this mission by providing quality services, security, analysis, and work products in support of the agency mission.

In each of the service areas the delivery capability of the agency has improved. In Administration, the IT staff provides data analysis services, reliable operations, assistance with communication goals, and practical disaster recovery. Active Members can access on-line benefit estimates and account information. Benefit recipients can look up general account information on line. Accounting and employers have faster services as well as ACH. Incremental progress has yield value for TRS members and staff.

The TRS Information Technology plan focuses maintaining services, improving business recovery, and keeping costs level. The TRS will maintain its existing pension software by moving it to a new hardware platform. The recent acquisition of the HP c3000 blade server allows the TRS to consolidate servers and workstations. Because the TRS made the equipment investment in October 2009, support costs and equipment costs are expected to decline over the next 5 years.

The TRS continues to improve the competency of the IT staff by providing training and technical opportunities. The new system along with the state data center allows potentials for business recovery that have not before existed. The system can be accessed securely from anywhere. The IT staff will develop security policy and procedures to support robust and secure access to applications. Complete policy development and training will be a focus over the next two years. This plan addresses security from both the policy and practical points of view.

SECTION 1: AGENCY CONTACT INFORMATION

Agency Name: *Teachers' Retirement System*

Role: Plan Owner

Name: TRS Board, Represented by David Senn, Executive Director
Telephone Number: 406-444-3376
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Role: IT Contact

Name: Bill Hallinan, IT Manager
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Role: IT Contact (Alternate)

Name: Rex Merrick
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SECTION 2: AGENCY IT MISSION

2.1 Agency IT Mission Statement

The mission of the TRS Information Technology Staff is to serve the TRS staff, members and benefit recipients by providing quality services, security, analysis, and work products to support the long-term financial security of the TRS membership while maintaining the stability of the fund. The TRS Information Technology staff does this by fulfilling their commitments in the following areas:

Customer Service

- Maintain a secure and stable computing environment so expected services are easy to use, accurate and available even in a disaster.
- Develop and maintain a permanent and secure information repository for the TRS and its members.

- Interact and communicate with customers to clarify their needs and suggest improvements based on our specialized knowledge.
- Produce analysis, applications and services that are secure, reliable, and useful to TRS employees and members.
- Act with integrity, sincerity, and respect to provide the best possible solutions.

Effectiveness and efficiency in producing quality work

- Learn continuously to attain and maintain quality in all of our work.
- Coordinate our efforts in order to conserve scarce resources while generating products that are effective, easy to use, and a good value.
- Apply our knowledge creatively and consistently to provide timely and accurate solutions to problems.

Responsiveness to a changing environment

- Adapt our methods to optimize the use of emerging information technology.
- Design processes and applications to provide a smooth transition between successive versions or changes of platforms.
- Assess present equipment, software, and processes to facilitate a smooth migration to future technologies and business processes.

SECTION 3: AGENCY SECURITY PROGRAM

3.1 Security Program

Trust is essential in the TRS business model. TRS members and benefit recipients expect the TRS not only to keep accurate records, but to secure these records in all circumstances – in day to day operations, the archiving of records, and in business recovery. Breaching the trust of the TRS members and benefit recipients is costly and threatens the security of the retirement system in practical and political ways. Therefore the TRS security program seeks to monitor and improve security on an ongoing basis. The security plan covers policy, daily practice and monitoring, external reviews, and security planning as a part of future operations.

Bill Hallinan is the designated Information Security Program Manager. A constraint of the TRS security program is the limited number of staff to perform and carry out tasks related to security policy and implementation. The TRS has used DOA services and training to begin building a business recovery model. Current costs to fully implement the business recovery system would mean spending upwards of \$60,000 for redundant hardware and committing 10% of IT staff time to implement the business recovery system and related policies. No agency funding is at risk if the agency does not meet requirements for information security. However, meeting information security goals is a priority of the TRS board and director.

General security policy for the TRS is set by the State of Montana Department of Administration (DOA). Effective July 1, 2008, the statewide Enterprise Information System Security Policy requires that the TRS implement requirements for organization information security, information protection and control, and compliance. The TRS will continue to work with DOA Information Technology Service Division to meet these requirements. The TRS is developing internal policy that will meet the current state guidance based on the National Institute of Standards and Technology (NIST) guidance. The TRS is developing specific agency security policies as appropriate. All TRS staff have read and signed the latest TRS computer use policy. Depending on the stipulations of the DOA security policy, the TRS staff may attend additional training on computer security policy and practice. TRS information technology personnel have had full background checks.

Daily practice consists of securing computers, renewing passwords every 60 days, monitoring building access, securely disposing of paper, monitoring security alerts, patching and updating software, monitoring logs, scanning computers for viruses and vulnerabilities, and other daily security tasks that arise. Sensitive computers are kept in a locked and environmentally controlled room. Unused services and data are tagged as inaccessible. Recently the TRS upgraded its equipment. The upgrade allows all workstation and servers to be virtualized, eliminating desktops. Backup tapes will be encrypted. A second redundant system or service is expected to be available by 2012.

The TRS participates in a security scan of its computer by DOA security staff to access vulnerabilities in the configuration or operation of the TRS servers and workstations. These external reviews provide a trusted third party to examine the TRS computer for potential security threats. The TRS keeps its computers on a separate branch of the state computer network, making it easier to isolate activity to the TRS network traffic.

In terms of security planning, the TRS intends to implement the recommendations from the DOA in regards to security policy, to continue to make security a decision factor for new equipment and computing methods, and educate the TRS information technology staff and users on security. The TRS is virtualizing its servers and plans on making full use of the new state Data Center as a primary or backup site. The disaster recovery model will assume virtualized servers and workstations.

SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES

4.1 Goals

Goal Number 1:

ITG 1 Pension Application Software Maintenance.

Description: Maintain Pension+ to keep the system and its data current and complete. The goal for the next two years is to consolidate the recent gains in functionality and hardware while restricting modifications to those that are low cost and absolutely necessary.

Benefits: Maintain currency with all software and hardware versions to avoid bugs and downtime.

Which state strategic goal(s) and/or objective(s) does your goal address? Maintaining then existing IT system supports the state goal to develop IT resources in an organized, deliberative and cost-effective manner.

Supporting Objective/Action

ITO 1-1 Maintain the existing pension application software with minimal changes.

Describe the business requirements or business problem driving this objective: budgets are tight, so negotiate between TRS staff and the pension software vendor to keep programming changes to a minimum. This will decrease costs associated with custom programming.

Describe the benefits to be derived from the successful completion of this objective: The TRS will have fewer changes which will result in fewer bugs, reduced programming costs, fewer processing errors, and less down-time.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective): The risk of too little maintenance is that the pension software fails due to latent bugs and/or unanticipated complexity when code is revised.

What is the timeframe for completion of this objective? Annually each April.

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? Over the next two years, the Pension application software will function consistently well with few changes.

ITO 1-2 Review and renew current maintenance agreements for software support for Pension+, OpenVMS, HP Blade Servers, and Powerhouse.

Describe the business requirements or business problem driving this objective: Without current maintenance agreements, operating systems and application software become out of date. The on-going maintenance contacts are necessary for timely service.

Describe the benefits to be derived from the successful completion of this objective: The TRS will use current and supported software on all platforms. Software support provides confidence for advancing technology at the TRS; for example, barriers to new technology are overcome with help from experts around the world.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not

completing this objective; risks associated with completing this objective): Risks involved with upgrades are small, but some implementation issues may arise that have to be ironed out. In action or not completing this objective will create bottlenecks, affect the efficiency of delivering TRS services, and compromise business recovery efforts.

What is the timeframe for completion of this objective? Annually each July.

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? The maintenance agreements are accurate, comprehensive, and consistently renewed.

Goal Number 2:

ITG 2 Comprehensive and Well Practiced Disaster Recovery and Business Continuity Services

Description: Develop the means to recreate and recover essential business services in less than 8 hours from anywhere using limited staff.

Benefits: Provides assurance that TRS can fulfill its obligations to members and benefit recipients in a useful way in case of an emergency. Provides a means to work with other state agencies in practicing and coordinating disaster services. The measure of success is to setup a business continuity site in four hours, run TRS operations on such a site for a couple days, and restore the recovery site to the home site in four hours. The practice of disaster recovery occurs twice a year. The plan contains longer recovery scenarios for timelines up to one year.

Which state strategic goal(s) and/or objective(s) does your goal address? This will improve government services by assuring benefit recipients continue to receive benefits during a disaster. An added benefit of disaster recovery planning is attention to the protection of private information within the TRS information systems when normal business is disrupted.

Supporting Objective/Action

ITO 2-1 Continue with COOP and DR training, requirements definition, and planning

Describe the business requirements or business problem driving this objective: In a disaster environment, the roles and work environment may change. The TRS staff will understand their role in the disaster recovery environment and the steps necessary to complete essential work.

Describe the benefits to be derived from the successful completion of this objective: The TRS staff will have more confidence that it can recover during an emergency.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective): This objective relies on coordination with the business continuity operations of DOA. In an emergency the TRS staff may need to co-locate or buy reasonably priced relocation services. Other work priorities at the TRS may prevent key staff from participating and completing practice exercises.

What is the timeframe for completion of this objective? On-going with yearly milestones.

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? In a training exercise, the TRS staff or a minimum number of TRS staff will be able to run essential TRS operations from any location and coordinate with DOA continuity of operations staff.

ITO 2-2 Install redundant disaster recovery capability in Miles City.

Describe the business requirements or business problem driving this objective: Best practice is to have a remote disaster recovery site.

Describe the benefits to be derived from the successful completion of this objective: In case of a catastrophic failure in Helena, the Miles City data center will have the ability to support the TRS system.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective): Inaction may induce complacency in providing TRS service during an emergency.

What is the timeframe for completion of this objective? November 2011

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? The TRS IT staff will be able to pull the plug on the Helena operations and see the Miles City operations within 5 minutes.

Goal Number 3:

ITG 3 Demonstrate competency with the new set of TRS software, virtual servers, virtual workstations, SAN, and backup devices.

Description: In October 2009, the TRS purchased a HP blade system with the capacity to virtualize servers and workstations. The goal is to be competent in the operation of the equipment and software under all conditions.

Benefits: The TRS staff will be able to quickly and efficiently fulfill its obligations to members and benefit recipients in a useful way during daily operations and in case of an emergency. The equipment provides a means to utilize the state data center and remotely access the TRS environment securely from anywhere.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal utilizes IT best practices to implement and manage information technology systems in a coordinated manner; and continues to encourage and promote the use of innovative technologies for delivering government services.

Supporting Objective/Action

ITO 3-1 Cross-train and document daily operations.

Describe the business requirements or business problem driving this objective: In daily operations, consistency in the operations of the computing environment is fundamental to productivity. Because the server and workstations are virtual, by necessity the operations have to be highly reliable. Cross training, practice, and documentation are key to maintaining a highly reliable environment.

Describe the benefits to be derived from the successful completion of this objective: The TRS staff will have a highly reliable, consistent, and accessible computer operation.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective): Staff will lose productivity and confidence in the system if it is not 100% available.

What is the timeframe for completion of this objective? October 2010

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? Up-time on the system will be 99.99% for a year.

ITO 3-2 Practice comprehensive backups and restores.

Describe the business requirements or business problem driving this objective: In daily operations, consistency in the operations of the computing environment is fundamental to productivity. Because the server and workstations are to be virtual, by necessity the operations has to be highly reliable. Practicing and documenting the skills necessary to have a highly reliable environment are key.

Describe the benefits to be derived from the successful completion of this objective: The TRS staff will have a highly reliable, consistent, and accessible computer operation.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective): Staff will lose productivity and confidence in the system if it is not 100% available.

What is the timeframe for completion of this objective? October 2010

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? Up-time on the system will be 99.99% for a year.

Goal Number 4:

ITG 4 Complete and current IT policies

Description: Develop complete and current TRS IT policies that comply with state policy.

Benefits: Provides the TRS board and staff a clear platform from which to drive the direction and security of TRS computer operations.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal protects the TRS members' privacy of information through observable and auditable policies.

Supporting Objective/Action

ITO 4-1 Write, review, and seek board approval for IT policies.

Describe the business requirements or business problem driving this objective: As the State implements its policies, agencies are required to define the details associated the policy at the agency level. The TRS may be vulnerable without further policy development at a granular level. In addition, security audits take place against a complete set of policies. Such security audits are necessary to show due care and diligence.

Describe the benefits to be derived from the successful completion of this objective: The TRS staff will have a comprehensive IT policy.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective): Inaction will delay implementation of security auditing, leave the TRS vulnerable in some security-related incidents, and violate some state IT security policies.

What is the timeframe for completion of this objective? November 2010

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? This objective will be completed when the policy documents are listed, compared to those required by state standards, and are reviewed and approved by the TRS board.

ITO 4-2 The TRS staff will be trained on and understand the IT policies that apply to them.

Describe the business requirements or business problem driving this objective: Best practice is to train staff in IT policies on a regular basis.

Describe the benefits to be derived from the successful completion of this objective: The TRS staff will understand and behave according to applicable IT policies.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective): Inaction will delay policy implementation.

What is the timeframe for completion of this objective? May 2011

Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed? TRS personnel observe applicable IT policy.

Goal Number 5:

ITG 5 Maintain FileNet while Improving Workflow Analysis, Implementation, and Design

Description: Use a work flow system to automate and track incoming, on-going, and completed work as measured by volume of correspondence under workflow control. The measure of success is to build one

application to allow a request of benefits.

Benefits: The TRS will have a virtualized environment and the means to make operational its backup and disaster recovery environments.

Does this goal support the State IT Strategic Plan? If so, how? This goal develops IT resources in an organized, deliberative and cost-effective manner. The TRS workflow project will use existing resources and an MIS consultant to accomplish the goal.

SECTION 5: IT INITIATIVES (FY2010 – FY 2015)

5.1 IT Initiatives

The TRS has no IT Initiatives for FY2010 – FY2015. If there was a major shift from the existing pension application software in the next two years for either TRS or MPERA, then the TRS would begin investigating the possibilities for developing an initiative.

SECTION 6: ENTERPRISE ALIGNMENT

6.1 State Strategic Plan for IT Alignment

Please indicate which Communities of Interest your agency plans to be involved in. Agencies are asked to select at least one, but can select as many as needed. Further planning work by the communities of interest will take place following submission of agency IT plans.

- ☒ Government Services
- ☐ Public Safety
- ☒ Human Resources
- ☐ Environmental
- ☐ Education
- ☒ Economic
- ☐ Cultural Affairs
- ☒ Finance

The community of interest to which the TRS belongs is the one that promotes the long-term financial security for TRS membership while maintaining the stability of the TRS fund. A natural partner is the Montana Public Employees Retirement System. The Retirement community could fit within Government Services, Human Resources, Economics, and/or Finance depending on the nature of the shared interest. At this time, the most pressing issue for the TRS is the work to redesign a retirement plan, but this work depends on the direction from the SAVA interim committee, legislature, and TRS board. At this time there is not enough information to project how exactly the TRS IT plan will align with the yet to be decided interest areas.

SECTION 7: EXPENDITURES

7.1 Planned Agency IT Expenditures

<u>Expense Category</u>	<u>FY2010</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>
Personal Services	\$ 238,412	\$ 238,412	\$ 239,912	\$ 245,910	\$ 252,058	\$ 258,359
Operating Expenses	\$ 150,000	\$ 142,375	\$ 144,809	\$ 147,305	\$ 154,862	\$ 157,484
Initiatives	\$0	\$0	\$0	\$0	\$0	\$0
Other expenditures	\$0	\$60,000	\$0	\$0	\$0	\$0
Totals	\$ 388,412	\$ 440,787	\$ 384,721	\$ 393,214	\$ 406,920	\$ 415,843

SECTION 8: ENTERPRISE IT INVENTORY

8.1 Inventory Update

Has the Agency updated their IT Inventory Database as outlined in Section 8 of the instructions? Yes

Date that Agency last updated their IT Inventory: 3/8/2010

SECTION 9: ADDITIONAL INFORMATION - OPTIONAL

Other types of information that support the agency's IT Plan. Some examples might include other COI participation, reference to other IT plans such as GIS plan, eGovernment plan, security plan, staffing issues and constraints, etc.